P0997

Classical and 'omics' Approaches to Control Witches' Broom (*Moniliopthora perniciosa*) Disease of Cacao

Date: Monday, January 12, 2015
Room:

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In *Theobroma cacao* the main biotic stresses are cause by fungi, i.e *Moniliophthora perniciosa (*Mp*),* causal agent of witches' broom disease of cacao (WBD). Breeding of Mp-resistant varieties is confronted with two major difficulties at present. First, cacao resistant sources have been identified, but most of them are Scavina 6 descendants. Second, resistance from Scavina sources has shown to be unstable. The OMICS with the classical phytopatological and breeding approaches have allowed identifying genotypes with distinction in relation to WBD resistance, thus, carrying different resistance genes. New microsatellites and SNPs markers, and new QTLs (under natural and artificial inoculations) linked to WBD disease resistance have been identified. In parallel, histopatological studies of the cacao-Mp interaction revealed multiples modes of penetration of the fungus into cacao plants as well different mechanisms of resistance. The adaptability of Mp has also been considered, and advances in the understanding the breakdown of witches´ broom resistance, in Bahia, Brazil, have been achieved. Partial results of these projects and the overall strategies to control WBD will be presented.

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Meeting Information

When:
January 10 - 14, 2015
Where:
San Diego, CA